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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,524	01/29/2004	Jonathan Paul Patrizio	200314241-1	5514

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EXAMINER	
KIM, EUNHEE	
ART UNIT	**PAPER NUMBER**
2123	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/767,524	PATRIZIO ET AL.	
	Examiner	Art Unit	
	Eun H. Chung	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☒ Claim(s) *10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed 02/07/2007 has been received and considered. Claims 1-14 are presented for examination.

Claim Objections

2. Claim 10 is objected to because of the following informalities:

Claim recites the limitation "that can serve as a model" in lines 3 and 12. It is unclear what the limitation refers. Since a virtual computer cluster "that can serve as a model" is not a virtual computer cluster "that has to serve as a model", any arts that does not state "that cannot serve as a model" read on the claim limitation.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter and they lack a practical application of a Judicial exception due to failure to produce a useful, concrete and tangible result.

As per claims 1 and 10, the claimed subject mater fails to sufficiently reflect at least one practical utility set forth in the descriptive portion of the specification. Also the claimed subject matter fails to produce a result that is limited to having real world value rather than a result that may be interpreted to be abstract in nature a, for example, a thought, a computation, or

manipulative data. Simply generating a virtual computer cluster does not produce a tangible result. This produced result remains in abstract and, thus, fails to achieve the required status of having real world value.

Claims 2-9 and 11-14 further confuse the intended metes and bounds and in no way resolve the deficiencies of parent claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart et al. (US Patent No. 7,107,191), in view of Chao et al. (US Patent No. 6,393,485).

Stewart et al. teaches (Claims 1 and 10) a system and method (Fig. 1) comprising: a simulator (Fig. 1) including:

a virtual-cluster generator (Fig. 1-4) for generating a first virtual cluster (Fig. 1-4, Col. 3 lines 52-65, Col. 5 lines 18-28).

Stewart et al. fails to teach a virtual-failure event selector providing for selecting a virtual-failure event corresponding to a real-failure event that applies to a real computer cluster;

virtual pre-failure configuration corresponding to a real pre-failure configuration of said real computer cluster; and

generating a second virtual cluster;

a virtual post-failure configuration corresponding to a real post-failure configuration of said real computer cluster.

Chao et al. teaches a virtual-failure event selector providing for selecting a virtual-failure event corresponding to a real-failure event that applies to a real computer cluster (Col. 9 lines 27-54, Col. 14 lines 60-67, Col. 15 lines 32-47);

virtual pre-failure configuration corresponding to a real pre-failure configuration of said real computer cluster (Col. 9 lines 27-54, Col. 14 lines 60-67, Col. 15 lines 32-47);

a virtual post-failure configuration corresponding to a real post-failure configuration of said real computer cluster (Col. 9 lines 27-54, Col. 14 lines 60-67, Col. 15 lines 32-47); and

generating a second virtual cluster (Col. 9 lines 27-54, Col. 14 lines 60-67, Col. 15 lines 32-47).

Stewart et al. and Chao et al. are analogous art because they are both related to simulation.

Therefore, it would have been obvious to one of ordinary skill in the art of at the time the invention was made to virtual-failure event of Chao et al., in the method of modular architecture for optimizing a configuration of computer system of Stewart et al., to improve the management of clustered computer system that expands the number of nodes available for failover conditions (Chao et al.: Abstract).

Stewart et al. teaches (Claim 2) wherein, in said real pre-failure configuration, said real computer cluster runs a software application AC on a first computer of said real computer cluster and not on a second computer of said real computer cluster (Col. 16 lines 48-52, Fig. 4), and wherein, in said real post-failure configuration, said real computer cluster runs said application on said second computer but not on said first computer (Col. 16 lines 48-52, Fig. 4);

(Claim 3) said real computer cluster (Fig. 1-4) including profiling software (Fig. 2) for providing a descriptive profile of said real computer cluster, said virtual-cluster generator generating said virtual cluster in said pre-failure configuration using said descriptive profile (Col. 4 lines 10-30, Col. 5 lines 1-40);

(Claim 4) wherein said real computer cluster is connected to said simulator for providing said descriptive profile thereto (Fig. 1-4, Col. 3 lines 60-63);

(Claim 5) an evaluator for evaluating said virtual cluster in its post-failure configuration (Fig. 1-4, Col. 8 lines 31-39);

(Claim 6) a test sequencer (Fig. 1-4, Col. 12 lines 19-62), said test sequencer selecting different virtual-failure events to be applied to said first virtual cluster in said pre-failure configuration so as to result in different post-failure configurations of said virtual cluster (Fig. 1-4, Col. 12 lines 19-62);

(Claim 7) a statistical analyzer for statistically analyzing evaluations of said different post-failure configurations of said virtual cluster (Fig. 1-4, Col. 8 lines 31-39);

(Claim 8) wherein said test sequencer automatically tests different pre-failure configurations of said virtual cluster against different failure events, said statistical analyzer providing a determination of optimum pre-failure configuration by statistically analyzing evaluations of the resulting post-failure configurations (Fig. 1-4, Col. 8 lines 31-39, Col. 12 lines 19-62);

(Cliam 9) wherein said simulator is connected to said real computer cluster for providing said determination thereto, said real computer cluster automatically reconfiguring itself as a function of said determination (Fig. 1-4, Col. 8 lines 5-30, Col. 12 lines 62-67);

(Claim 11) wherein steps a, b, and c are iterated for different configurations of said real computer cluster and for different sets of said predetermined failure types, said method further comprising providing a recommended configuration for said real computer cluster (Fig. 1-4, Col. 3 lines 52-65, Col. 5 lines 18-28, Col. 8 lines 5-53, Col. 12 lines 19-67);

(Claim 12) gathering profile information about said real cluster in said first configuration, wherein said first virtual computer cluster is generated using said profile information (Fig. 3, Col. 4 lines 10-30, Col. 5 lines 1-40);

(Claim 13) wherein steps a, b, and c are iterated for different configurations of said real computer cluster and for different sets of said predetermined failure types, said method further comprising providing a recommended configuration for said real computer cluster (Fig. 1-4, Col. 3 lines 52-65, Col. 5 lines 18-28, Col. 8 lines 5-53, Col. 12 lines 19-67);

(Claim 14) transmitting said recommendation to said real computer cluster; and implementing said recommended configuration on said real computer cluster (Fig. 1-4).

Response to Arguments

9. Applicant's arguments filed 01/19/2007 with respect to the rejection(s) of claim(s) under 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eun H. Chung whose telephone number is 571-272-2164. The examiner can normally be reached on 8:30am-5:00pm Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EHC

4/14/07

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